IN THE CLAIMS

This Listing of Claims replaces all prior Listings and versions of claims in the above-identified application.

Listing of Claims

1-66. (Cancelled)

67. (Currently Amended) A fusion protein comprising ~~a soluble protein~~ erythropoietin joined without an intervening peptide linker to an immunoglobulin (Ig) domain that does not contain a variable region~~, wherein the soluble protein is selected from the group consisting of a growth factor, a cytokine that is not interleukin-10 (IL-10), and an active variant of said growth factor or said cytokine that is not IL-10~~.

68. (Previously Presented) The fusion protein of Claim 67, wherein the Ig domain is selected from the group consisting of IgG-Fc, IgG-C_H and IgG-C_L.

69-76. (Cancelled)

77. (Previously Presented) A pharmaceutical composition comprising the fusion protein of Claim 67 in a pharmaceutically acceptable carrier.

78. (Previously Presented) A composition comprising the fusion protein of Claim 67, wherein said fusion protein is dimeric and wherein said composition is essentially free of monomeric fusion protein.

79. (Cancelled)

80. (Previously Presented) A nucleic acid encoding the fusion protein of Claim 67.

81. (Previously Presented) A host cell transfected or transformed with the nucleic acid of claim 80, enabling the host cell to express the fusion protein.

82. (Previously Presented) The host cell of claim 81, wherein the host cell is a eukaryotic cell.

83. (Previously Presented) The host cell of claim 82, wherein the eukaryotic cell is a mammalian cell.

84. (Previously Presented) A method of producing a fusion protein of Claim 67, comprising:

a) transfecting or transforming a host cell with an expression vector comprising

at least one nucleic acid encoding the fusion protein of Claim 67;

b) culturing the host cell under conditions effective to express said fusion protein; and

c) harvesting the fusion protein expressed by the host cell.

85. (Previously Presented) A method of purifying the fusion protein of Claim 67, comprising:

a) obtaining a composition comprising the fusion protein; and

b) isolating the fusion protein from contaminants by column chromatography.

86. (Previously Presented) The method of claim 85, wherein the fusion protein is isolated from contaminants by size-exclusion chromatography.

87. (Withdrawn-Amended) A method of treating a condition treatable with ~~a member of the Growth Hormone (GH) supergene family~~erythropoietin, comprising administering an effective amount of the fusion protein of Claim 67 to a patient in need thereof.

88. (Cancelled)

89. (Withdrawn-Amended) The method of claim 87, ~~wherein the fusion protein is an EPO Immunoglobulin fusion protein and~~ wherein the condition is a deficient hematocrit, and wherein administration of the fusion protein increases the hematocrit of the patient.

90. (Currently Amended) A fusion protein comprising ~~a soluble protein~~ erythropoietin joined at its carboxy-terminus by a peptide linker to the amino terminus of an immunoglobulin domain that does not contain a variable region, wherein the peptide linker ~~that~~ consists of ~~a mixture of~~ between 2 and 7 amino acid residues, wherein the amino acid residues are selected from the group consisting of: glycine and serine~~, to the amino terminus of an immunoglobulin domain that does not contain a variable region, wherein the soluble protein is selected from the group consisting of a growth factor, a cytokine that is not interleukin 10 (IL-10), a cytokine that is not an interferon, and an active variant of any of said growth factor, cytokine that is not IL-10, or cytokine that is not an interferon~~.

91. (Previously Presented) The fusion protein of Claim 90, wherein the Ig domain is selected from the group consisting of IgG-Fc, IgG-C_H and IgG-C_L.

92. (Previously Presented) The fusion protein of Claim 90, wherein the peptide linker

consists of a mixture of 2, 4 or 7 amino acid residues selected from the group consisting of glycine and serine.

93. (Previously Presented) The fusion protein of claim 90, wherein the peptide linker is SerGly.

94. (Currently Amended) The fusion protein of claim 90, wherein the peptide linker is SerGlyGlySer (SEQ ID NO:1).

95. (Cancelled)

96. (Currently Amended) The fusion protein of Claim 90, ~~wherein the soluble protein is erythropoietin (EPO), and~~ wherein the fusion protein has an EC_{50} of less than about 1000 ng/ml in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

97-101. (Cancelled)

102. (Previously Presented) A composition comprising the fusion protein of Claim 90, wherein said fusion protein is dimeric and wherein said composition is essentially free of monomeric fusion protein.

103. (Cancelled)

104. (Previously Presented) A method of producing a fusion protein of Claim 90, comprising:

a) transfecting or transforming a host cell with an expression vector comprising at least one nucleic acid encoding the fusion protein of Claim 90;

b) culturing the host cell under conditions effective to express the fusion protein; and

c) harvesting the fusion protein expressed by the host cell.

105. (Currently Amended) The method of Claim 104, wherein said fusion protein is dimeric, and wherein said method further ~~comprising~~ comprises purifying dimeric fusion protein from monomeric fusion protein.

106-124. (Cancelled)

125. (New) A fusion protein comprising an erythropoietin protein joined without an intervening peptide linker to an immunoglobulin (Ig) domain that does not contain a variable

region, wherein the fusion protein comprises the natural erythropoietin amino acid sequence and the natural immunoglobulin domain amino acid sequence at the junction of the fusion protein.

126. (New) A fusion protein comprising an erythropoietin protein joined without an intervening peptide linker to an immunoglobulin (Ig) domain that does not contain a variable region, wherein the fusion protein has an EC_{50} of less than about 10 ng/ml in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

127. (New) The fusion protein of Claim 67, wherein the erythropoietin is a full-length human erythropoietin.

128. (New) The fusion protein of Claim 67, wherein said fusion protein has an EC_{50} of less than 4 ng/ml.

129. (New) The fusion protein of Claim 67, wherein said fusion protein has an EC_{50} within 4 fold of the EC_{50} of non-fused EPO, on a molar basis, in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

130. (New) The fusion protein of Claim 90, wherein the Ig domain is selected from the group consisting of IgG-Fc and IgG-C_H.

131. (New) The fusion protein of Claim 90, wherein the peptide linker consists of 2 amino acid residues, wherein the amino acid residues are selected from the group consisting of glycine and serine.

132. (New) The fusion protein of Claim 90, wherein the peptide linker consists of 4 amino acid residues, wherein the amino acid residues are selected from the group consisting of glycine and serine.

133. (New) The fusion protein of Claim 90, wherein the peptide linker consists of 7 amino acid residues, wherein the amino acid residues are selected from the group consisting of glycine and serine.

134. (New) The fusion protein of Claim 90, wherein the peptide linker consists of 7 amino acid residues, wherein the fusion protein has an EC_{50} of less than about 10 ng/ml in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

135. (New) The fusion protein of Claim 90, wherein the peptide linker consists of 7

amino acid residues, wherein the fusion protein has an EC_{50} of less than about 4 ng/ml in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

136. (New) The fusion protein of Claim 90, wherein said fusion protein has an EC_{50} within 4 fold of the EC_{50} of non-fused EPO, on a molar basis, in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

137. (New) A fusion protein comprising an erythropoietin protein joined without an intervening peptide linker to an immunoglobulin (Ig) domain that does not contain a variable region, wherein the fusion protein has an EC_{50} of less than about 1000 ng/ml in an EPO-dependent *in vitro* bioassay using a human UT7/epo cell line that proliferates in response to EPO.

138. (New) The fusion protein of claim 90, wherein the peptide linker is $Ser(GlyGlySer)_2$ (SEQ ID NO:3).